



# TRANSDUCERS

## CURRENT / PNEUMATIC TRANSDUCER

### MODEL UCP-242

#### DESCRIPTION

The **Model UCP-242 Current/Pneumatic Transducer** provides low cost pneumatic control of valves, dampers, or other pneumatic devices. The **Model UCP-242** comes with snap-track for easy mounting. Quick-disconnect terminals provide easy wiring removal for servicing. Barbed fittings for 1/4" plastic tubing and an inline filter are provided.

#### OPERATION

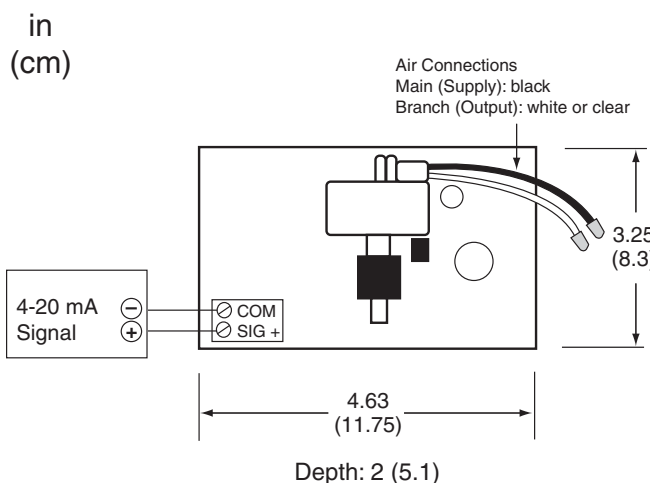
The **Model UCP-242** accepts a 4-20 mA signal and outputs 3-15 psig. The unit is loop-powered, requiring no power supply for controlling pneumatic devices. Upon a loss of signal, the **Model UCP-242** will eventually bleed the pressure in the branch line. This transducer is well-suited for the control of small to medium volume loads, such as small to medium pneumatic actuators. Large volume loads, such as large pneumatic actuators, or long tubing runs may also be controlled but will exhibit a slower response time.

#### FEATURES

- **Low cost**
- **Inline filter provided**
- **Snap-track mounting**
- **1/4" (0.64 cm) barbed tube connectors**
- **Quick-disconnect terminals**
- **Loop-powered control**
- **Excellent linearity**
- **Low hysteresis**
- **No calibration required**



#### DIMENSIONS / WIRING / PIPING



#### SPECIFICATIONS

<b>Supply voltage</b>	None, loop-powered	<b>Output</b>	3-15 psig (20.7-103.4 kPa)
<b>Input impedance</b>	500Ω nominal	<b>Input</b>	4-20 mA
<b>Max pressure</b>	25 psig (172.4 kPa)	<b>Linearity</b>	2% of span
<b>Air consumption</b>	0.008 scfm @ 20 psig (3.8 cm <sup>3</sup> /sec @ 137.9 kPa)	<b>Hysteresis</b>	1% of span
<b>Air capacity</b>	515 scim @ 20 psig (135 cm <sup>3</sup> /sec @ 137.9 kPa)	<b>Dimensions</b>	3.25"H x 4.625"W x 2.0"D (8.3 x 11.75 x 5.08 cm)
<b>Temp</b>	32° to 122°F (0° to 50°C)	<b>Weight</b>	0.6 lb (0.27 kg)
<b>Humidity</b>	5% to 95% RH non-condensing	<b>Warranty</b>	18 months



### INSTALLATION / WIRING / CHECKOUT

#### Installation

Mount the **UCP-242** inside a NEMA 1 control panel in a clean, dry environment. Barbed fittings are provided for terminating 1/4" (0.64 cm) plastic tubing. The **UCP-242** must be mounted in an upright position (refer to arrows on unit). For best results, the transducer should be mounted within five degrees of upright position. Wire terminations are marked for 4-20 mA operation.

#### Wiring

Make all electrical connections in accordance with job wiring diagrams and in compliance with local and national electrical codes. Wiring terminations are made on screw terminals labeled SIG + and COM.

#### Checkout

Verify with a meter that a 4-20 mA DC signal is present and that polarity is correct. Verify that 20 psig (137.9 kPa) main air is present. Be sure the **UCP-242** is mounted in an upright position.

#### To check transducer operation:

1. Adjust the input signal to 20 mA. Branch pressure should be 15 psig (103.4 kPa).
2. Adjust the input signal to 4 mA. Branch pressure should be 3 psig (20.7 kPa).

Note: This is a rough functional check only. The **UCP-242** is a highly accurate device and laboratory quality meters and gauges are required to properly check calibration.

**CAUTION:** The Model UCP-242 utilizes parts that can be damaged by supply air containing synthetic compressor oil vapor, acid fumes, or other corrosive vapors. Synthetic compressor oils must not be used. Standard control air filtering practices should be observed:

- Supply air must be dried, oil-separated, and filtered using a refrigerated air dryer, a particulate filter, and a coalescing type filter.
- The system must be properly maintained such that all particles larger than 0.03 microns are filtered out and that less than 0.1 ppm oil vapor exists.
- At the compressor, using an absorbent pre-filter followed by a coalescing oil removal filter, such as the K-337 or K-339, is recommended.
- Using a Model A-4000-120 oil-indicating device prior to installing any UCP-242 is also recommended. This device will provide an indication of the amount of oil being discharged from the air compressor.
- At the UCP-242, installing the inline filter (Model FILN05 provided with the UCP-242) in the main air line is recommended.

### ORDERING INFORMATION

MODEL	DESCRIPTION
UCP-242	Current/Pneumatic transducer, 4-20 mA/3-15 psig (20.7-103.4 kPa)
<b>RELATED PRODUCTS</b>	
PG-05 B-373-1	Pressure gauge, 0-30 psig (10-200 kPa) Gauge tee with mounting tabs